|   | AL   | THORITY         |                        |               | ITU               | RE               |                |                     |       |        | _           |
|---|--|-----------------|------------------------|---------------|-------------------|------------------|----------------|---------------------|-------|--------|-------------|
| KAISER CEMENT   | & GYPSUM CORP. X KAI   | SER GYPSUM CO.  | VORK SHEE              |               | ENTE              | STEAMSHIP CO     | ۰ , ۱۵         | iv.                 | SERI  |        | YEAR        |
| PERMANENTE TR   | CIER SAND & GRA  | AVEL CO.        |                        |               |                   |                  | 2              | 42                  | ア     | 73     |             |
|   |  | - A 1 1 O 11    | TTLE                   | WAShe         | nefa              |                  | ISSUE<br>DATE_ | ,                   | 1/28  | 1/13   |             |
|   | SET ACQUISITION IS REQUES  | red as follows: |                        |               | ESTIMATED COST AN |                  |                | D USE SPENDING PLAN |       |        |             |
| NO. QUANTITY  | DESCRIPT   | ION AND TER     | RMS                    |               | TOTAL             | PERIOD<br>OF USE | IN-SER<br>DAT  |                     | YR.   | 5.     | AMOUNT      |
|   |  |                 |                        | \$            |                   |                  |                |                     |       | \$     |             |
|   | Dry Dust Collec  | tor for Calci   | ning Kettl             | les 80,       | ,000              | 15 YRS           | 417            | 13                  | 13/6  | 8      | 6,000       |
|   |  |                 |                        |               | •                 |                  |                |                     |       |        |             |
|   |  |                 |                        |               |                   |                  |                |                     | •     |        |             |
|   |  |                 |                        |               |                   |                  |                |                     |       |        |             |
|   |  |                 |                        |               |                   |                  |                |                     |       |        |             |
|   |  | ۸٦              | •                      |               |                   |                  |                |                     |       |        |             |
|   | 1-5  |                 |                        | J.            |                   |                  | ļ.             |                     |       |        |             |
|   | 125  |                 |                        |               |                   |                  |                |                     |       |        |             |
|   |  |                 |                        |               | ·                 |                  |                |                     |       |        | ·           |
|   | 175  | 002+3           | ·<br>                  | FOTAL \$80    | 0,000             | )                |                | ·                   | TOTAL | - \$ 2 | 80,000      |
| (REFERENCE BY   | J <del>ust 9 73</del>  | Bully           | <b>L</b> - <b>f</b>    |               |                   |                  |                |                     |       |        |             |
| AMOUNT AND<br>EXPLANATION OF<br>RELATED<br>NON-CAPITAL<br>EXPENSE |  | Co              | PY                     | TO DES        | ٠<br>د د          | 412              | 7 <i>h</i> 3   | ·<br>·              |       |        |             |
| STATEMENT OF  | Original Cost OF OV  | ,,,,,,          | 1 10 1                 | 312 DES       | FAR               | ires             | •              | \$ <u></u>          |       |        |             |
| GAIN OR LOSS<br>ON  | Estimated Recovery from Sale<br>Estimated Demolition and Re                | •               |                        | •             | \$_               |                  |                |                     |       |        | <del></del> |
| RETIRED<br>FACILITIES   | Book Value as of   |                 |                        |               |                   |                  |                |                     |       |        |             |
| <u> </u>  | Estimated Gain or (Loss) on  |                 |                        | •             | <del></del>       |                  |                |                     | / /   | 7 0,13 | المستهداة   |
| NATURE OF<br>CAPITAL<br>EXPENDITURE                               | REPLACEMENT OF EXI   | <b>İENT</b>     | *                      | .*<br>•       |                   |                  |                |                     |       |        |             |
|   | RIZATIONS<br>ON APPROVED   |                 |                        | ACCOUNT       |                   |                  |                |                     |       |        |             |
| ORIGINATOR DATE   |  | DEPRE           | BOOK POL               | TAX           | ME                | THOD OF FINA     | CAPITA         |                     | EXPE  |        | W. CR. APP  |
|   |  | METHOD ST       | LINE                   | S.O.Y, D      | 7_                |                  | YES            | NO                  | YES   | NO 1   | ES NO       |
| 15/P. J. Frankl   | GINATUR DATE   |                 |                        | J , O . , , D | <b>-</b>   !      | Lease            | 1 1            |                     |       | l      | 1           |
| 17. J. H.   | in 114. 12/26/73   | LIFE 15         | YEARS                  | IL YEAR       | , I               | Leasehold        |                |                     |       |        |             |
|   | in 117, 12/26/73   | GUIDELINE CL    | YEARS                  | IL YEAR       |                   | Improvement      |                |                     |       |        |             |
| VICE PRESIDEN   | in 17. 2/26/73 INAUTHORITY STATE  9. COSTA 110/73 IN A GEN'L. MANAGER DATE |                 | YEARS<br>ASS #<br>TER: |               |                   |                  | X              | . !                 | N.    | ×      | x           |

FORM 27-A 9/7

Dry Dust Collector for Calcining Kettles
Page 2

A.F.E. Worksheet Seattle Plant

The Seattle Plant calcining mill is equipped with two calcining kettles used for calcination of gypsum. Each of these kettles uses a wet collector and scrubber system to collect, condense and discharge a combination of steam and dust which is exhausted from the kettle vent stacks.

The effluent from the wet scrubbers and collectors is being discharged into the Duwamish River. The plant has been able to operate this system by obtaining a waste discharge permit from the State of Washington. The permits were issued by the former Washington State Water Pollution Control Commission and the last permit issued to Kaiser expired in February, 1972.

An application for renewal of the discharge permit was submitted to the State. This application was reviewed by the Washington State Department of Ecology and the plant was issued a conditional permit to operate the wet collectors and to discharge the effluent into the Duwamish River until December 31, 1973. The Department of Ecology has advised the plant that any effluent discharge will not be permitted after the deadline date. Corrective action must be taken.

It is proposed to eliminate the wet collectors and effluent discharge by installing a dry baghouse system similar to that recently installed at the Long Beach Plant. It is proposed to install one baghouse of sufficient capacity to handle both kettles plus some vents on the bucket elevators and hummer screens. The reclaimed gypsum dust will be collected and recycled back to the calcining kettles.

Upkeep and maintenance on the wet collector systems is a constant problem. Maintenance costs in 1972 amounted to \$4,600. Of this amount, approximately \$1,500 has been expended for materials and \$3,100 for maintenance labor. It is estimated that maintenance costs on the baghouse will not be as high as on the wet collectors and savings in maintenance materials items will be about \$750 per year. It is not expected that any reduction in maintenance personnel will result from this installation.

Gypsum dust currently being exhausted from the kettles is dumped as an effluent into the Duwamish River. Installation of the baghouse will permit this dust to be collected and recycled back into the system which will save \$33,000 annually.